

ABSTRACT

A crystal substrate and a crystal film of a III-V compound of the nitride system which have no defects in the surfaces. A method of manufacturing a crystal of a III-V compound of the nitride system, and a method of manufacturing a device. A base crystal layer is formed over a basal body. After etching the base crystal layer using a first mask pattern, an intermediate crystal layer is formed. After etching the intermediate crystal layer using a second mask pattern, a top crystal layer is formed. The crystal growth of the intermediate crystal layer starts at the walls of grooves formed by etching in the base crystal layer. This reduces the possibility that dislocations develop into the intermediate crystal layer. No dislocations occurring above the first mask pattern propagate through the top crystal layer since the dislocations are removed by etching using the second mask pattern.

09726860-113000